



COMPETENCIES IN EDUCATION FOR SUSTAINABLE DEVELOPMENT

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ABSTRACT

Climate change, biodiversity loss, resource depletion, and poverty growth are just a few of the issues that have arisen as a result of human development activities. ESD includes learning and educational activities aimed at developing alternative values and transformative actions that lead to problem-solving and the realisation of a sustainable society by taking the initiative to accept the problems of modern society as our own and addressing the problems in our immediate environment (think globally, act locally) in order to ensure that future generations will be able to live in abundance. The goal of ESD is to empower children, youth, students, and adults to participate in the creation of a more ecologically friendly, socially equitable, and economically efficient environment. The major purpose is to educate young people with the education and knowledge they need to make long-term decisions that will benefit global development. Children will learn how to tackle and cope with global challenges in order to make the world a better place through ESD. As a result, UNESCO seeks to improve society through changing education, assisting individuals in developing the information, skills, and behaviours necessary for long-term growth. This is referred to as long-term competencies. It is critical to acquire sustainable capabilities through education in order to solve problems successfully in a given environment and achieve Agenda 2030's sustainable development goals. This article discusses the competences for sustainable development, the various types of competencies established by UNESCO, and the methods through which these competencies can be obtained by students who are accountable for making the world a more sustainable place.

KEY WORDS: Sustainable Development, Education for Sustainable Development, Sustainable Development Goals, Sustainable Competencies.

INTRODUCTION:

Achieving a more sustainable world necessitates the use of high-quality education. This was emphasised at the United Nations World Summit in Johannesburg in 2002, where the reorientation of current education systems was seen as a critical component of long-term development. Education for sustainable development (ESD) facilitates the development of the knowledge, skills, understanding, values, and actions necessary to create a world that protects and conserves the environment, promotes social fairness, and encourages economic stability. Environmental education, which aimed to educate people's knowledge, skills, values, attitudes, and behaviours to care for their environment, influenced the development of ESD. ESD's goal is to empower individuals to make decisions and take activities that improve our quality of life while also protecting the environment. It also aspires to include the values of sustainable development into all elements and levels of education. ESD must be viewed as an important aspect of good education, as well as a notion inherent in lifelong learning: all educational institutions, from preschool to higher education, as well as non-formal and informal education, can and should encourage the development of sustainability skills. ESD is a comprehensive and transformational approach to education that takes into account learning content and outcomes, as well as pedagogy and the learning environment. It should provide learner-centered, interactive teaching and learning environments. It calls for an action-oriented, transformative pedagogy that promotes self-directed learning, cooperation, problem-solving, inter- and transdisciplinary learning, and the integration of formal and informal learning to acquire critical sustainability competencies. More empirical study is needed to better understand the development, assessment methods, and impact of new ESD policies and programmes.

EDUCATION FOR SUSTAINABLE DEVELOPMENT:

ESD equips students with the knowledge, skills, values, and attitudes they need to make informed decisions and take responsible actions that promote environmental integrity, economic viability, and a just society. Education for Sustainable Development is a lifelong process and an essential component of high-quality education. It improves learning on cognitive, social, emotional, and behavioural levels. It is comprehensive and transformative, encompassing learning content and results, pedagogy, and the learning environment as a whole. ESD is a key enabler of all Sustainable Development Goals, and it accomplishes its goal by transforming society. While respecting cultural diversity, ESD empowers people of all genders, ages, and generations. It also necessitates interactive teaching and learning approaches that motivate and empower students to modify their behaviour and take action in the interest of long-term sustainability. As a result, education for sustainable development fosters skills such as critical thinking, anticipating future situations, and making collaborative decisions. Integrating essential sustainable development concerns into teaching and learning is an important part of education for sustainable development. This could incorporate lessons on climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption, for example. It also necessitates interactive teaching and learning approaches that motivate and empower students to modify their behaviours and take action in the interest of long-term sustainability. As a result, ESD encourages skills such as critical thinking, visualising future scenarios, and mak-

ing collaborative decisions. (UNESCO).

DEFINITIONS OF ESD:

Education for Sustainable Development is an "interdisciplinary learning methodology covering the integrated social, economic, and environmental aspects of formal and informal curriculum". (Wikipedia)

"ESD is essential for the achievement of a sustainable society and is therefore desirable at all levels of formal education and training, as well as in non-formal and informal learning." (Council of the European Union, 2010)

"ESD is about the learning needed to maintain and improve our quality of life and the quality of life of generations to come ... ESD enables people to develop the knowledge, values and skills to participate in decisions about the way we do things individually and collectively, both locally and globally, that will improve the quality of life now without damaging the planet for the future." (Sustainable Development Education Panel Report, 1998)

WHY ESD:

The need for education to address the planet's growing and changing environmental challenges spawned the concept of ESD. All agendas, programmes, and activities that promote sustainable development must prioritise education. Education must be integrated into sustainable development, and education must be integrated into sustainable development. ESD encourages the inclusion of these critical sustainability issues in local and global contexts in the curriculum in order to better prepare students to understand and respond to the changing world. ESD aspires to provide learning outcomes that include critical and systematic thinking, collaborative decision-making, and taking responsibility for current and future generations. ESD necessitates a rethinking of the learning environment, both physical and virtual, because traditional single-directional knowledge delivery is insufficient to inspire learners to act as responsible citizens. To implant the ideology of sustainable development, the learning environment must adapt and use a whole-institution approach. Educator capacity building and policy assistance at the worldwide, regional, national, and local levels aid in the transformation of learning institutions. Empowered youth and local communities working with educational institutions become crucial players in promoting long-term development.

COMPETENCIES IN EDUCATION FOR SUSTAINABLE DEVELOPMENT:

"Competencies are the positive combination of knowledge, ability and willingness in the availability of the individual to cope successfully and responsibly with changing situations". (Weiner's, 2001)

Josef Leisen, a physics-educationalist explained 2009 the term in a typically scientific manner using the symbolic language of science, that Competence = knowledge + ability = action (or 'in prose': Competence = active handling of knowledge (and values).

Sustainability competency is a combination of knowledge with skill and attitude which enable individual to act and behave with respect to the environment. (Anderson, 2015)

“Complexes of knowledge, skill and attitude that enable successful task performance and problem solving concerning real world sustainability problems, challenges and opportunities”. (Wiek, Lauren & Redman, 2011)

“A competency is an observable, behavioral act that demonstrates a professional knowledge, skill and ability.” (Willard et al. 2010)

From the above definitions we can conclude the competencies find their reflection and roots in successful actions. Competencies are achievable and can be developed through experience and action. Those who have gained these competencies can play a vital role in moving society towards sustainability.

There is broad agreement that to become sustainability citizens, one must possess key competencies for sustainability, defined by UNESCO (2017) as: (a) systems thinking, (b) anticipatory, (c) normative, (d) strategic, (e) collaboration, (f) critical thinking, (g) self-awareness, and (h) integrated problem-solving competencies. (UNESCO, 2017)

ESD focuses on the development and strengthening of individual competencies, allowing individuals to contribute to and participate in various types and dimensions of sustainable development processes. It is clear from that definition that all types of competencies and skills are included, including basic competencies such as reading, writing, and numeracy. Higher-level skills like creativity, solution-oriented thinking, and actionability are critical for ESD because without them, we wouldn't be able to develop the methods, concepts, and procedures that will allow us to achieve the space of sustainability. After more than two decades of intense discussions on this issue, it seems that an international consensus could be reached with the following set of eight competencies published by UNESCO in 2017:

- (a) **Systems thinking Competence:** The ability to recognize and understand relationships, analyse complex systems, consider how systems are embedded in various domains and scales, and deal with uncertainty. It is the ability to think broadly while making a decision based on the current situation, taking into account the long-term consequences of your actions.
- (b) **Anticipatory (Future thinking) Competence:** The ability to comprehend and evaluate multiple futures – possible, probable, and desirable; to create one's own future visions; to apply the precautionary principle; to assess the consequences of actions; and to deal with risks and changes.
- (c) **Normative (Values thinking) Competence:** The ability to comprehend and reflect on the norms and values that guide one's activities, as well as to negotiate sustainability values, principles, goals, and targets in the face of competing interests, trade-offs, and contradictory knowledge.
- (d) **Strategic thinking Competence:** The ability to work together to design and implement creative measures to promote sustainability on a local and global scale.
- (e) **Collaboration (Interpersonal/Emphatic) Competence:** Empathic leadership is defined as the ability to learn from others, to understand and respect others' needs, viewpoints, and actions (empathic leadership), to cope with group problems, and to foster collaborative and participatory problem solving.
- (f) **Critical thinking:** The ability to challenge norms, practises, and attitudes; reflect on one's own beliefs, perceptions, and behaviours; and take a stand in the sustainability debate.
- (g) **Self-awareness:** The ability to reflect on one's own role in the local community and in global society, to continuously analyse and motivate one's actions, and to deal with one's thoughts and desires.
- (h) **Integrated problem-solving:** The capacity to apply various problem-solving frameworks to difficult sustainability problems, as well as to produce viable, inclusive, and equitable solution alternatives that promote sustainable development, while integrating the above-mentioned competencies.

(Source: UNESCO 2017)

STRATEGIES TO ATTAIN SUSTAINABLE COMPETENCIES:

ESD strives to create competencies that enable people to reflect on their own activities, taking into account current and future social, cultural, economic, and environmental consequences on a local and global scale. Individuals as members of society should also be enabled to behave sustainably in complicated situa-

tions, which may require them to take risks; and to engage in socio-political processes that move their communities toward long-term development. The following methods can be used to develop long-term competencies:

By Integrating ESD competencies in policies, strategies and programmes

- Innovative pedagogical approaches to ESD competencies: teaching and learning practices to develop ESD competencies (interactive, project based, critical reflection, learner centered pedagogy).
- Transform all aspects of learning environment through a whole institution approach to ESD to enable learners to live what they learn and learn what they live.
- Curriculum developments: Integrate sustainability issues, in a particular those enshrined in the 17 SDGs such as climate change, into all kinds of learning.
- Processes and tools to assess ESD competencies: Dynamic and innovative assessment tools to be used.
- Connecting quality education with ESD competencies development
- Professional development in ESD (teachers, university staff, non-formal educators, etc.)
- Inclusion of ESD competencies in teacher education

(Source: Journal Sustainability, 2019)

Competencies and attitudes to be emphasized in ESD

1. Ability to think critically
2. Ability to plan with anticipation of a future scenario
3. Ability to think in multidimensional and integrative ways
4. Ability to communicate
5. Ability to cooperate with others
6. Attitude to respect relations and connections
7. Attitude to participate proactively

Source: National Institute for Educational Policy Research “Study on Education for Sustainable Development (ESD) in Schools”. [Final Report]

PEDAGOGIC APPROACHES IN ESD TO ACHIEVE SUSTAINABLE COMPETENCIES:

1. **Critical reflection** – including the more traditional lecture, but also newer approaches such as reflexive accounts, learning journals, and discussion groups.
2. **Systemic thinking and analysis** – the use of real-world case studies and critical incidents, project-based learning, stimulus activities, and the use of the campus as a learning resource.
3. **Participatory learning** – with emphasis on group or peer learning, developing dialogue, experiential learning, action research/learning to act, and developing case studies with local community groups and business
4. **Thinking creatively for future scenarios** – by using role play, real-world inquiry, futures visioning, problem-based learning, and providing space for emergence.
5. **Collaborative learning** – including contributions from guest speakers, work-based learning, interdisciplinary/ multidisciplinary working, and collaborative learning and co-inquiry.

Source: University of Plymouth

CONCLUSION:

It is critical to effectively promote ESD in order to achieve sustainable competencies, and it is critical that ESD is positioned in the school management strategy, the internal school organisation is streamlined, and the school as a whole systematically handles ESD, ESD is appropriately positioned in the teaching plans, the perspective of collaboration with the local community, universities, and businesses is incorporated, and communication and refining are prioritised.

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